



SynQuest Laboratories, Inc.
PO Box 309, Alachua, FL 32616-0309
Tel. 386/462-0788; FAX 386/462-7097

Material Safety Data Sheet

Transportation Emergency: 1-800-451-8346

Date last revised: March 19, 2013

Date printed: March 19, 2013

SECTION 1. ----- CHEMICAL IDENTIFICATION-----

CATALOG #: M073-2-01
NAME: TANTALUM PENTAFLUORIDE

SECTION 2. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

CAS NUMBER: 7783-71-3
MOLECULAR FORMULA: TaF₅
MOLECULAR WEIGHT: 275.94

SECTION 3. ----- HAZARDS IDENTIFICATION -----

LABEL PRECAUTIONARY STATEMENTS

TOXIC.
TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
CORROSIVE.
CAUSES SKIN BURNS AND EYE DAMAGE. DESTRUCTIVE TO THE RESPIRATORY TRACT.
REACTS VIOLENTLY WITH WATER.
TARGET ORGANS
KIDNEYS, BONES.

SECTION 4. ----- FIRST-AID MEASURES-----

GENERAL ADVICE

CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE. MOVE OUT OF DANGEROUS AREA.

ORAL EXPOSURE

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CONSULT A PHYSICIAN.

INHALATION EXPOSURE

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CONSULT A PHYSICIAN.

EYE EXPOSURE

ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS WITH FINGERS. CONSULT A PHYSICIAN.

DERMAL EXPOSURE

IN CASE OF CONTACT, WASH SKIN IMMEDIATELY WITH SOAP AND COPIOUS AMOUNTS OF WATER. CONSULT A PHYSICIAN.

SECTION 5. ----- FIRE FIGHTING MEASURES -----

FLASH POINT

NONE

EXTINGUISHING MEDIA

SUITABLE: FOAM, DRY CHEMICAL, OR CARBON DIOXIDE.

UNSUITABLE: DO NOT USE WATER.

COOL ALL AFFECTED CONTAINERS WITH FLOODING QUANTITIES OF WATER.

FIREFIGHTING

PROTECTIVE EQUIPMENT: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

SPECIFIC METHOD(S) OF FIRE FIGHTING: USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS.

SPECIFIC HAZARD(S): EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

EVACUATE PERSONNEL TO A SAFE PLACE.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS, AND HEAVY RUBBER GLOVES. AVOID DUST FORMATION. AVOID BREATHING DUST, VAPORS, MIST OR GAS. ENSURE ADEQUATE VENTILATION.

ENVIRONMENTAL PRECAUTIONS

DO NOT LET PRODUCT ENTER DRAINS.

METHODS FOR CLEANING UP

SWEEP UP MATERIAL AND DISPOSE OF AS HAZARDOUS WASTE. PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS.

SECTION 7. ----- HANDLING AND STORAGE-----

HANDLING

USER EXPOSURE: AVOID CONTACT WITH SKIN, CLOTHING AND EYES. AVOID FORMATION OF DUST AND AEROSOLS. PROVIDE APPROPRIATE EXHAUST VENTILATION AT PLACES WHERE DUST IS FORMED. NORMAL MEASURES FOR PREVENTIVE FIRE PROTECTION.

STORAGE

SUITABLE: KEEP CONTAINER TIGHTLY CLOSED. STORE IN A COOL DRY PLACE. NEVER ALLOW PRODUCT TO GET IN CONTACT WITH WATER DURING STORAGE. DO NOT STORE NEAR ACIDS. HYGROSCOPIC. STORE UNDER INERT GAS. AVOID DIRECT SUNLIGHT.

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

ENGINEERING CONTROLS

SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST REQUIRED.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY: WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A DUST MASK TYPE N95 (US) OR TYPE P1 (EN 143) RESPIRATOR.

USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).

HAND: HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE'S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. WASH AND DRY HANDS.

EYE: TIGHTLY FITTING CHEMICAL SAFETY GOGGLES.

GENERAL HYGIENE MEASURES

WASH HANDS THOROUGHLY AFTER HANDLING. AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

APPEARANCE AND ODOR

SOLID

PHYSICAL PROPERTIES

MELTING POINT:	96.8 °C
BOILING POINT:	229.5 °C
DENSITY:	4.74 g/ml @ 20 °C

SECTION 10. -----STABILITY AND REACTIVITY-----

STABILITY

STABLE: STABLE UNDER RECOMMENDED CONDITIONS.

CONDITIONS TO AVOID: OPEN FIRE AND FLAMES, EXTREMES OF TEMPERATURE, MOISTURE AND DIRECT SUNLIGHT.

MATERIALS TO AVOID: STRONG REDUCING AGENTS, MINERAL ACIDS, ACTIVE METALS, BASES, ALCOHOLS. REACTS VIOLENTLY WITH WATER.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS: HYDROGEN FLUORIDE, TANTALUM/TANTALUM OXIDES.

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

ROUTE OF EXPOSURE

INHALATION: TOXIC IF INHALED. MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.

INGESTION: TOXIC IF SWALLOWED.

SKIN: TOXIC IF ABSORBED THROUGH SKIN. CAUSES SKIN BURNS.

EYES: CAUSES EYE BURNS.

SIGNS AND SYMPTOMS OF EXPOSURE

FLUORIDE POISONING MAY CAUSE NAUSEA, VOMITING, DIARRHEA, WEAKNESS, COMA, AND RESPIRATORY PARALYSIS. FLUORIDE ION CAN REDUCE SERUM CALCIUM LEVELS POSSIBLY CAUSING FATAL HYPOCALCEMIA. PROLONGED EXPOSURE TO FLUORINE COMPOUNDS CAN CAUSE DETERIORATION OF BONE AND TOOTH STRUCTURE, AND KIDNEY DAMAGE.

TO THE BEST OF OUR KNOWLEDGE, THE TOXICOLOGICAL PROPERTIES OF THIS PRODUCT HAVE NOT BEEN FULLY DETERMINED.

SECTION 12. ----- ECOLOGICAL INFORMATION -----

DATA NOT YET AVAILABLE.

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. ----- TRANSPORT INFORMATION -----

DOT

UN3260 - HC: 8 - PG: II

SECTION 15. ----- REGULATORY INFORMATION -----

EU ADDITIONAL CLASSIFICATION

SYMBOL OF DANGER: T, C

INDICATION OF DANGER: TOXIC. CORROSIVE.

RISK STATEMENTS: 23/24/25-29-34-41

SAFETY STATEMENTS: 13-22-24/25-26-36/37/39-45-61

US CLASSIFICATION AND LABEL TEXT

TSCA: LISTED ON TSCA INVENTORY; FOR R&D USE ONLY

SECTION 16. ----- OTHER INFORMATION -----

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SYNQUEST LABS, INC. SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT.